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# PRAIRIE DUCKS AND GEESE



DUCKS UNLIMITED (CANADA)



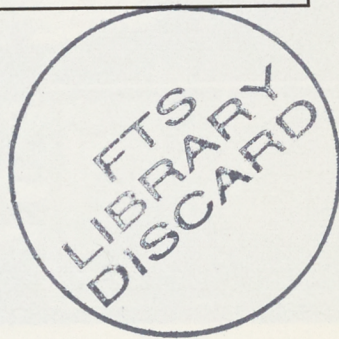




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DEPARTMENT OF LANDS AND FORESTS  
FORESTRY TRAINING SCHOOL  
ALBERTA

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## Conservation at Work





## *Foreword*

OVER the years we have had many inquiries from individuals, sportsmen's groups, schools and other organizations regarding the nature and scope of the work of Ducks Unlimited in Canada. In addition, there has been a constant stream of mail asking for information on waterfowl; covering their habits, distribution throughout the various flyways and, above all, some clear cut aids to identification of the various species.

In order that we may, to some extent, comply with these many requests, we have endeavored to compile a booklet combining an outline of Ducks Unlimited and its work in Canada. It includes illustrations and a short text of the main species of waterfowl found in western Canada.

Being a non-profit organization with operating funds contributed by sportsmen for the express purpose of establishing and improving waterfowl breeding areas in Canada, it is only natural that funds available for publications of this nature are limited.

We are fortunate in having on our staff the versatile and talented artist, Angus H. Shortt. From his pen and brush come the fine drawings and illustrations in this booklet.

We hope this publication will in some measure answer your many inquiries and that it proves both interesting and educational.

ANGUS GAVIN,  
General Manager,  
Ducks Unlimited (Canada)



# DUCKS UNLIMITED

A unique, non-profit conservation organization, one conceived and maintained by the sportsmen of North America as a potent working force in the cause of wildlife. Purpose of the organization may be illustrated by some of the terms applied to it over the years . . . A permanent work in sport and conservation . . . Working for waterfowl . . . Conservation at work.

The considerable success of Ducks Unlimited work has given such descriptives real meaning among wildfowlers, governments and conservation authorities of North America, and it has, in recent years, brought increasing awareness of this conservation crusade in other sections of the civilized world.

Organized in 1937 in the United States, Ducks Unlimited launched first field operations in western Canada in 1938. It represented an initial attempt at long-term direct aid to waterfowl by a non-government agency. The term "direct aid" refers to the location, construction and maintenance of waterfowl-producing projects, which remains a guiding principle of the international conservation group.

## WHY D.U. WAS FORMED

Formation of Ducks Unlimited was inspired by the growing realization among wildlife authorities and wildfowlers that the North American wildfowl population had become very seriously reduced. The fact was verified in the mid-thirties by the inaugural wildfowl census conducted principally across the western Canada prairie region. The census also provided clear evidence that the bulk of continental wildfowl breed in the Canadian prairie region. For this reason, Ducks Unlimited chose the area as locale for its pioneering work.

Enthusiastic acclaim greeted this first organized move to help wildfowl toward recovery. A very generous enthusiasm which has not subsided, but has grown with the years.



By the start of 1961, United States sportsmen had backed the Ducks Unlimited conservation effort to the extent of some seven millions of dollars. Practically all of this contributory revenue has been spent on that guiding principle—reconnaissance, construction, maintenance and development of wildfowl areas.

Balancing vital monetary contributions by United States citizens are the equally vital contributions of free land use and general co-operation by the people and governments of Canada. This is the international co-operation which is one of the real factors in Ducks Unlimited success.

## **BENEFITS FROM PROJECTS**

Co-operation by Canadians brings its own rewards. Established Ducks Unlimited projects usually are areas of stabilized water level. This means, in addition to direct benefits to wildfowl and other wildlife, an available and stable water supply which benefits residents, livestock and agricultural processes.

**At start of 1961, Ducks Unlimited had built and was maintaining approximately 559 active waterfowl projects in the Canadian prairie region. Total water acreage was 809,838.4 and total shoreline mileage was 4,644.1.**

Ducks Unlimited projects, widely varied in size, are measured in terms of production potential by the "miles-of-shoreline" ruler. Larger projects are designed to be productive each year, even during periods of decreased precipitation. Small projects, known as key waters or salvage areas, are designed to assist waterfowl production and to provide haven during periods of drought.

## **FINDING PROJECTS**

Location and development of project areas has several phases, each vital to progress of the Ducks Unlimited program. A new project may result from reconnaissance by staff members, key-men or from leads supplied by field workers with government agencies, farmers, ranchers or other private citizens. The proposed project could be:



1. A temporary marsh, now dry, which can be made more permanent as a waterfowl breeding area through engineering works which divert water from nearby streams or irrigation canals into the marsh.

2. A temporary marsh, tending to become dry each year because its shallow water evaporates too quickly, which can be made more permanent by construction of a dam on the outlet to control available water and provide greater depth against evaporation.

3. A temporary marsh, low in production because water is too shallow and transient, which can be made more productive by construction of dykes designed to hold available water within a selected portion of the marsh. While this results in a smaller area, it also results in a depth increase and a safer area for waterfowl.

4. A completely new area, not a natural marsh, which can be flooded to create a waterfowl-producing unit on which marsh conditions can be gradually developed and improved. Such projects are feasible chiefly in irrigation districts when water is abundantly available.

5. Knob-and-kettle potholes area, high in production during wet years but low in dry years. Production in such areas can be stabilized by establishing deeper water in selected potholes, which are available to waterfowl broods after the remainder become dry.

## PROJECT PROCEDURE

Owners of land to be affected by a proposed project are interviewed, usually by a D.U. survey crew member. If the owner is in favor, the survey proceeds. Levels are run and a contour survey is made. This outlines area to be flooded and traces source of water supply to see if it is adequate to maintain the flooded area at satisfactory and permanent level. Cross sections of the dam and spillway are taken and plotted. These, with the contour survey, form a basic plan. Once the plan is inspected and approved, it becomes basis of operations and the way is clear for legal work of the Ducks Unlimited land man.

The land man deals with negotiations covering the flooding of private or Crown lands, as the case may be. When these land negotiations have been formally completed, the project is turned over to the construction crews.



Project construction procedure varies considerably, depending upon type of soil and topography as well as on the amount of water to be handled. Where flow is light and a natural spillway is available, an ordinary earth-fill dam may suffice. A heavy flow necessitates a concrete structure. Some earth-fills are rock rip-rapped to minimize erosion by wave action.

Construction resulting in a finished project is not limited to building of dams on outlets of water bodies. It also involves intricate use of diversion ditches, canals and several types of control structures.

When engineers and construction crews have completed initial work on a project, the area receives full attention of the D.U. Production department. Its primary objective is to attain the project's best duck-producing level. Obviously, production work is a vital adjunct to project building.

## MARSH IMPROVEMENTS

Following an ever-expanding program of marsh management, production crewmen plant waterfowl food and cover plants along shorelines, in open marsh and on topsides and edges of earth-fill dams. Plants thus introduced include sago pondweed, smartweed and bulrush. Planting of cover growth on dams has the dual advantage of reducing erosion and providing cover for waterfowl.

Production men conduct the important work of banding, usually at selected D.U. projects. They also run annual transects—spring and summer duck population counts—and other checks on fluctuations of waterfowl numbers in the three prairie provinces. When the disease of botulism strikes at waterfowl, production men work at the task of cleaning up affected areas and keeping healthy birds away from danger zones.

During the past few years, Ducks Unlimited biologists have been conducting an inventory of important duck-producing areas in agricultural Saskatchewan. The information is being made available to the Saskatchewan government so that consideration may be given to the permanent setting aside of these areas for wildlife.



Water stabilization projects are built in co-operation with prairie governments. Often the project is chiefly beneficial to waterfowl, but frequently principal benefits go to small furred wildlife and fish. It is an established fact that such projects benefit adjacent communities in the sense of available water reserve.

## **COMMUNITY PASTURES**

D.U. co-operates with the federal government's Prairie Farm Rehabilitation Administration in the establishment of watered areas within community pastures in each prairie province. Usually large, such areas are game preserves and are closed to shooting. D.U.'s contribution to this type of conservation development involves building of dams and other control structures.

Constant liaison and field co-operation is maintained between D.U., the Canadian and U.S. wildlife services and provincial game branches. Fieldmen of these bodies have achieved an excellent integration of findings, leading to an ever-widening knowledge of waterfowl habitat requirements and general movements.

Work of Ducks Unlimited is a conservation effort of permanent nature. It will continue so long as there is real public appreciation of conservation values and recognition of waterfowl as one of the continent's great wildlife resources. A work of today, for the future.

## **D. U. CUMULATIVE RECORD**

Completion of 23 years of actual waterfowl project construction and development in February, 1961.

Total of active D.U. projects in Canada was 559 at start of 1961 construction season.

Since formation of Ducks Unlimited in 1937, United States' sportsmen have contributed in excess of seven million dollars toward constructive field work in Canada.



**Total acreage of D.U. projects now 809,838.4 and total shoreline mileage exceeds 4,644.1.**

Since 1938, D.U. has built hundreds of dams, water control structures and many miles of canals, ditches, fire lanes and fences to protect waterfowl nesting areas.

D.U. has banded approximately 125,000 waterfowl and has supported predator campaigns resulting in elimination of several million predators injurious to waterfowl.

**Several hundred Canadians in many walks of life act as D.U. Key-Men, a purely voluntary conservation role of considerable importance in the D.U. operation.**

Since 1950, D.U. fieldmen have conducted annual spring population counts and summer brood counts over established ground routes in the three prairie provinces. They also make regular observations in special study areas and plant valuable waterfowl food plants on selected projects.

Films produced by Ducks Unlimited have been screened in practically every section of North America and in other areas of the world. D.U.-provided conservation literature has had an even wider distribution, most significantly among students.

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## **WATERFOWL TOPOGRAPHY**

Conservation must be built upon observed facts, on a sound knowledge of the subjects under study. In any study of waterfowl species, it is vital that the observer possess sound knowledge as an essential basis for accurate evaluation and report.

This section is designed to assist the observer toward a better knowledge of the physical characteristics of waterfowl. It can aid you in accurate identification of the various species.

**Waterfowl are grouped by scientists under the family name Anatidae. The geese commonly found in western Canada are placed in the sub-family Anserinae and the ducks are divided into surface-feeding species (Anatini) and those which obtain their food by diving (Aythyini).**



Hunters readily distinguish between surface-feeding ducks, mallard, pintail, teals, etc., and diving or deep-water ducks like canvasback, redhead and bluebill (scaup).

Surface-feeding ducks, which dabble and tip for their food, are birds of shallow water. The diving ducks frequent the open, deeper water. Divers are chunkier birds with shorter necks and legs, the latter set far back on the body. Because of this leg location, they are awkward on land. Wings of the diver lack the characteristic metallic colors of the surface ducks and are smaller in relation to body weight. Smaller wings result in the fast wing beat and driving flight of the diving group.

## **SPECIES IDENTIFICATION**

Characteristic plumages are illustrated in following pictures of the various species. In the descriptive text beside each picture, the features which separate a species from all others are described in heavy print. Once they are learned, identification of a species becomes greatly simplified.

There are other sound methods of identification. When ducks at a distance are mere silhouettes, form and outline enable competent observers to accurately name species. For example, long neck and slim outline of the pintail betrays that species as far as it may be seen.

Some observers become very expert at long-range identification. Size, pattern, actions on water and in the air, voice and other characteristics, all serve to aid correct identification.

**Field marks described are most distinct in spring, when ducks are in full plumage. After the moult, which starts in June and continues until late fall, plumage characteristics may not be so prominent and, for a time, may be confusing. In full moult (eclipse plumage), many drakes look much like females and, during the fall, many juveniles in various stages of development add further difficulties. All have their distinctive characteristics, which can be learned by the serious observer.**

Much can be learned during the hunting season, which provides opportunities to closely examine many species. Even though specimens are juveniles or adults in obscure plumage, correct identification can be made by careful examination.

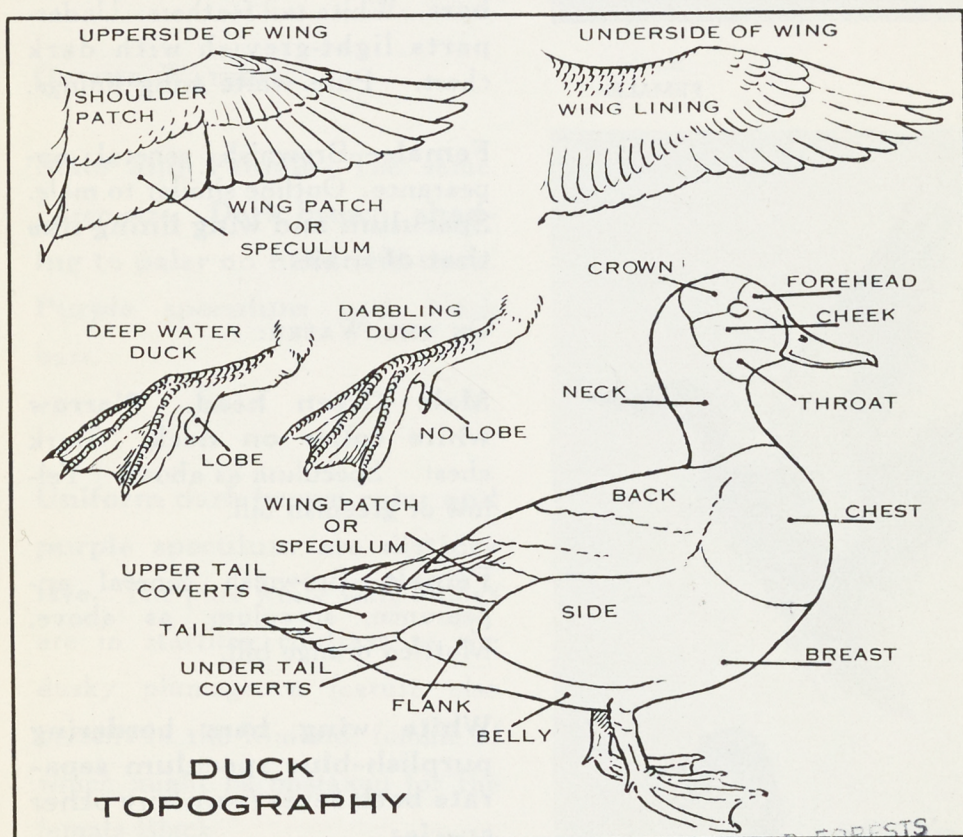


Look first at the hind toe. A broad lobe, absent in the surface feeder, identifies the diver. (See illustration below.) Wing characteristics are constant and can be recognized in all stages of plumage. These two features will serve to distinguish surface and diving ducks. When co-related with color of feet and bill, shape of head and bill, eye color, size and weight, it will establish the identity of specimens in any plumage.

## DUCK OUTLINE

To assist you in following the text description, D.U. Staff Artist Angus Shortt has prepared a duck outline with general topography. Parts named are clearly indicated so you will know the features which must be learned for accurate identification in the field.

The outline drawings (below) show the different areas of a bird's plumage and the terms used in describing them. Reference to these drawings and comparison with illustrations or specimens will greatly aid correct identification.



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# SURFACE-FEEDING DUCKS (Tribe Anatini)

## MALLARD

(*Anas p. platyrhynchos*)

Other names: Greenhead, Wild Duck, Stock Duck.

## FIELD MARKS

### IN FLIGHT:

**Male**—Large size. Iridescent green head. Purplish-blue speculum bordered by white bars. White tail feathers. Underparts light-greyish with dark chest. Pure white wing linings.

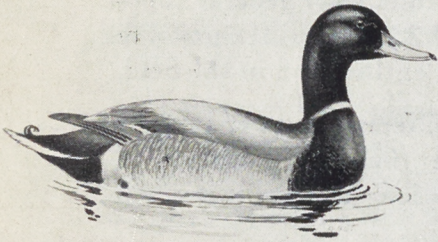
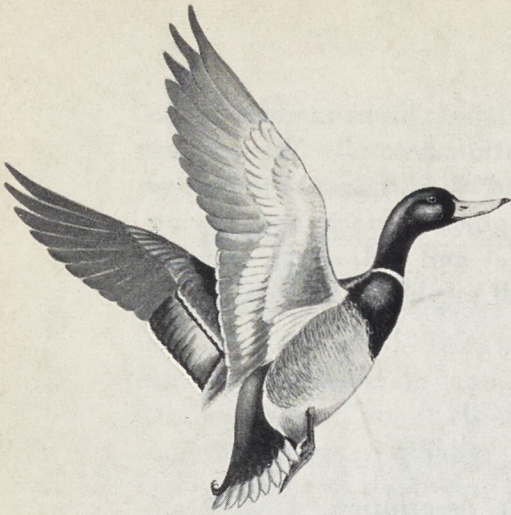
**Female**—Brownish general appearance. Outline similar to male. Speculum and wing lining like that of male.

### ON THE WATER:

**Male**—Green head. Narrow white collar on neck. Dark chest. Speculum as above. Yellow or greenish bill.

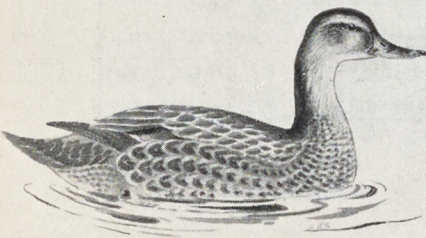
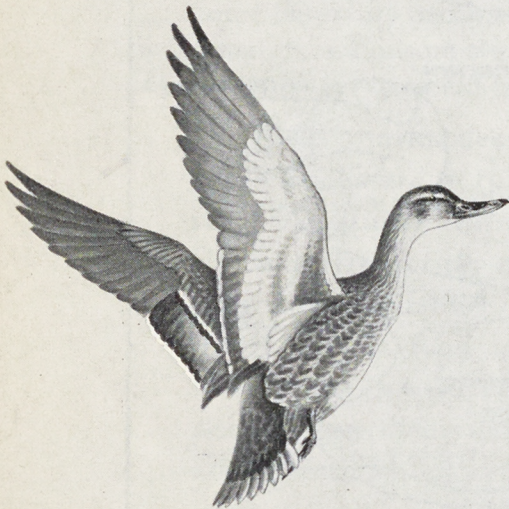
**Female**—Brownish general appearance, speculum, as above. Mottled orange bill.

White wing bars bordering purplish-blue speculum separate both sexes from any other species.



MALE

FEMALE





## BLACK DUCK

(*Anas rubripes*)

Other names: Black Mallard,  
Blackie.

### FIELD MARKS

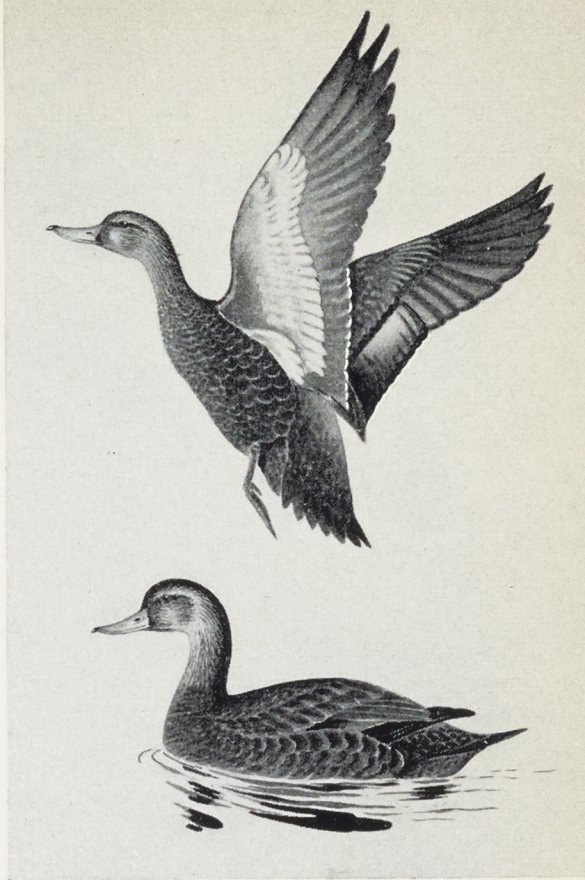
#### IN FLIGHT:

**Male and Female**—The same. Large, dark-brown ducks with **pure white wing linings** in striking contrast to dark plumage. **Metallic purple speculum**.

#### ON THE WATER:

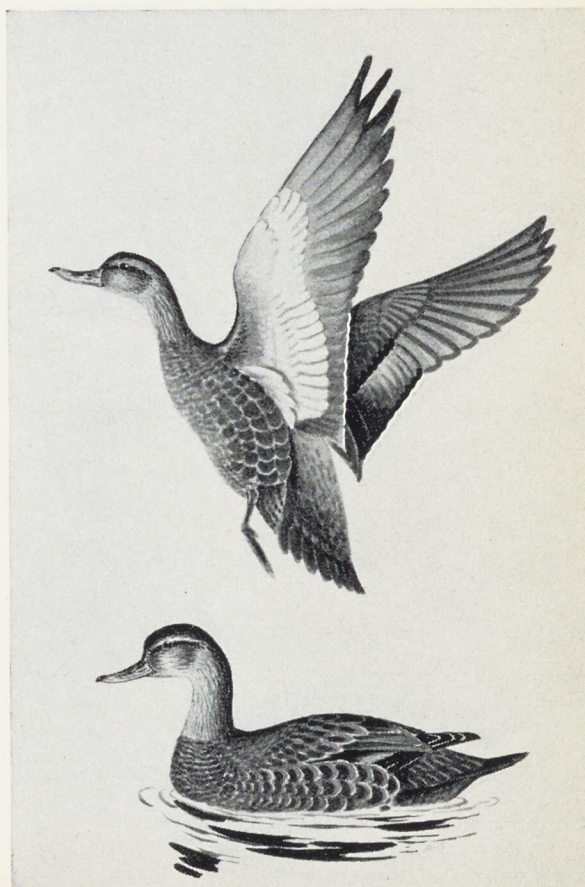
**Male and Female**—The same. Large size. **Dark brown, shading to paler on head and neck.** **Purple speculum** with black bars.

**Uniform dark brown color and purple speculum are distinctive.** The pure white wing linings are in startling contrast to the dusky plumage, a feature also present in the Mallard, female of which might be mistaken for the female Black.

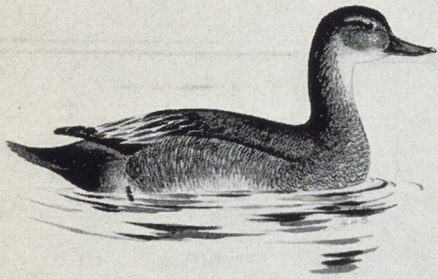
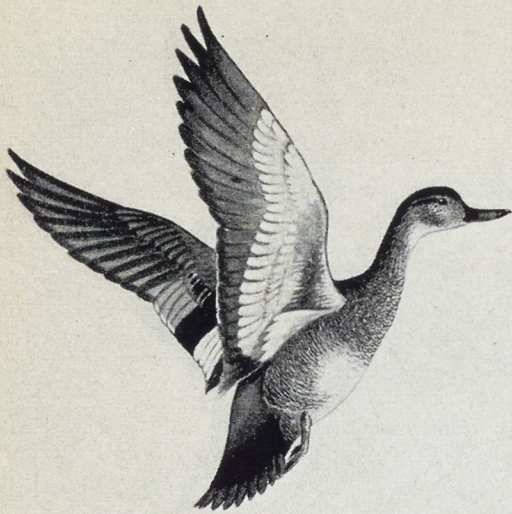


MALE

FEMALE

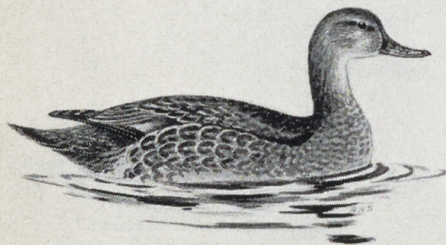
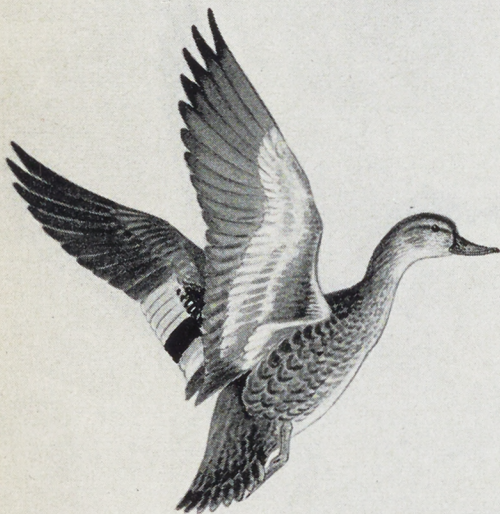






MALE

FEMALE



## GADWALL (*Anas strepera*)

Other name: Grey Duck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Medium size. **Greyish general appearance. Prominent rectangular black and white wing patches.** Tail coverts black, chest and sides grey, underparts white. Whitish wing linings, yellow-orange feet.

**Female**—Much like a female mallard but with **black and white wing patches.** Yellowish legs and feet.

#### ON THE WATER:

**Male**—**Greyish.** Black and white wing patches not always visible. **Black bill.** Grey duck with brownish head and **black bill.** Yellow-orange legs and feet.

**Female** — **Grey-brown overall, browner on body.** Slender, neat profile. Wing patches usually concealed. Orange bill.

**Black and white wing patch is best field mark in both sexes.**



**BALDPATE**  
**(*Anas americana*)**

Other names: Widgeon, Baldy.

**FIELD MARKS**

**IN FLIGHT:**

**Male**—Medium size. **Conspicuous white shoulder patches** on fore parts of wings. **White forehead and crown.** Breast and belly white.

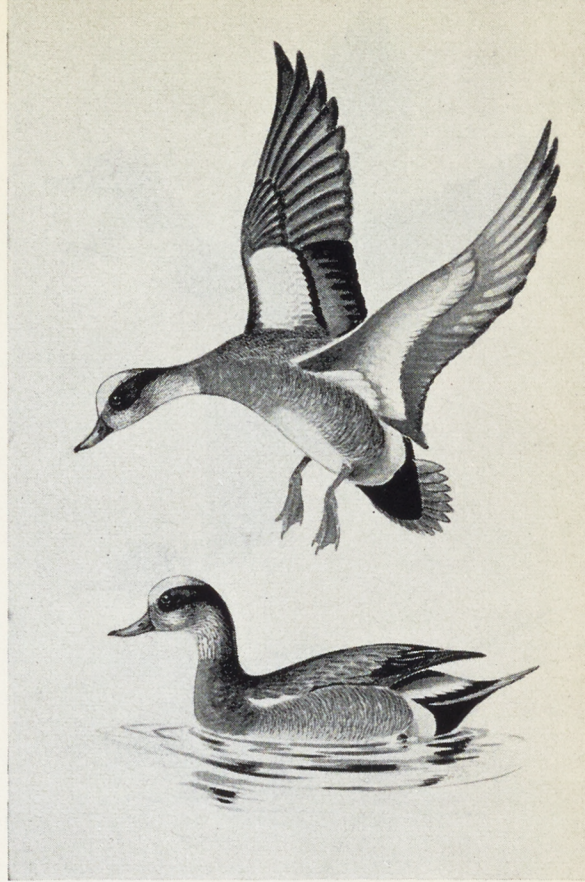
**Female**—Slightly smaller, head grey, without white marks. **White shoulder patches**, but less pronounced.

**ON THE WATER:**

**Male**—Dominant white forehead and crown. Generally **brownish-grey appearance.** Purplish-pink chest, cinnamon-brown sides, white flanks, black tail coverts. Blue-grey bill.

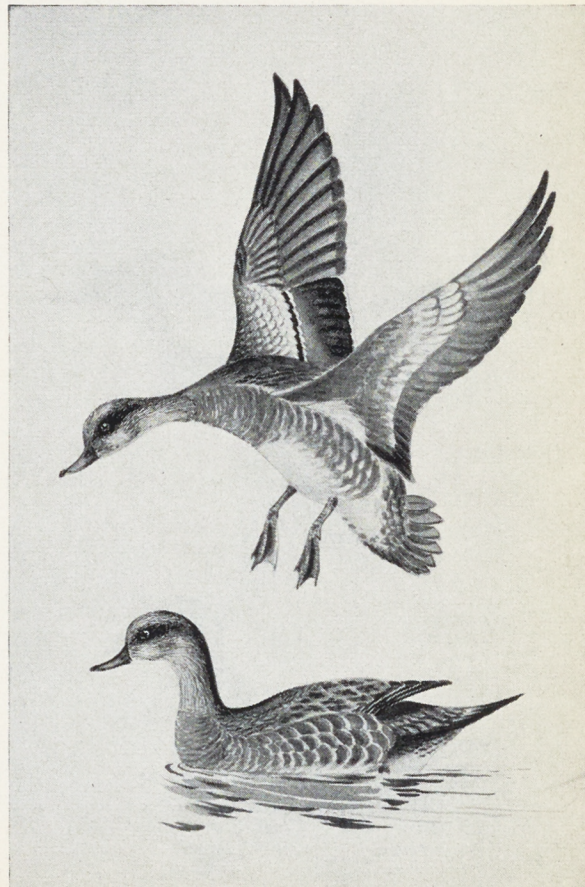
**Female**—Finely-speckled grey head and neck. Brownish body.

**Bold white shoulder patch,** more vivid in male, best field mark for both sexes.

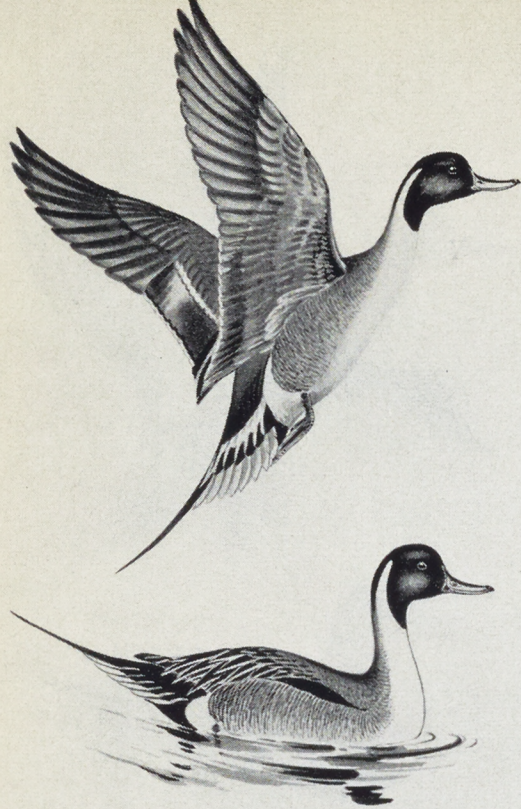


MALE

FEMALE

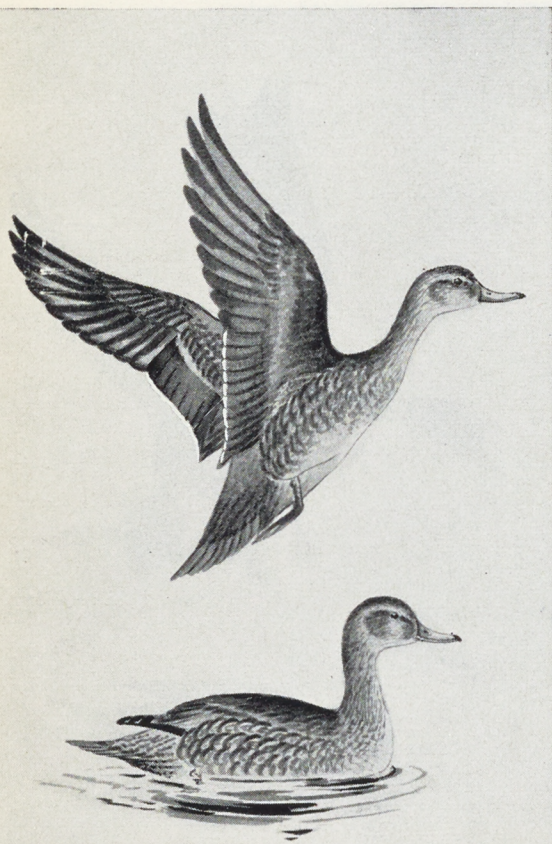






MALE

FEMALE



## PINTAIL (*Anas acuta*)

Other names: Sprig, Longneck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Dark brown head, long slender white neck, white underparts and long pointed tail feathers. Greenish speculum bordered by buff bar in front, white bar behind. Best identifying feature is slender, streamlined profile.

**Female**—A mottled brown duck with long slender neck. No pronounced wing pattern. White bar on trailing edge of wing is visible at close range.

#### ON THE WATER:

**Male**—Dark head, long slender neck, white chest and breast, long pointed tail feathers. Grey back and sides.

**Female** — Long slender neck, brownish appearance. Small neat head with slate-grey bill.

Long, streamlined profile in flight is best field mark for both sexes.



## WOOD DUCK

(*Aix sponsa*)

Other names: Summer Duck, Tree Duck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Striking white head pattern. Dark chest, white breast and belly. Prominent wedge-shaped tail. Dark grey, mottled wing linings.

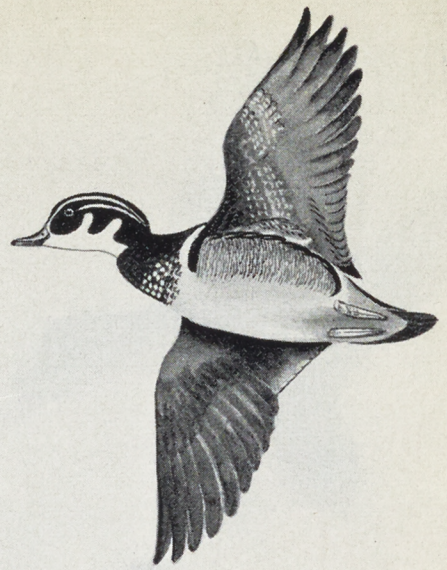
**Female**—Dark back, white breast and belly. Wedge-shaped tail. White patch encircling eye.

#### ON THE WATER:

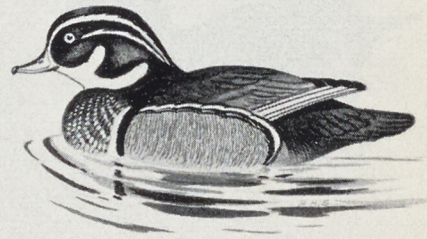
**Male**—Prominent crest, bold white markings and much iridescent coloring on head. Dark chest. One of the world's most beautiful ducks. In prairie region, most frequent in Manitoba.

**Female**—Crested head as in male, but generally dark brown. White patch encircles eye.

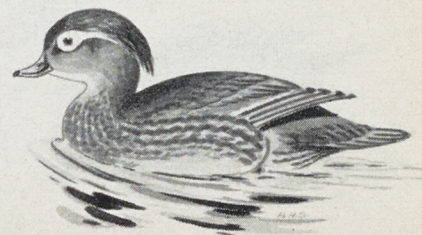
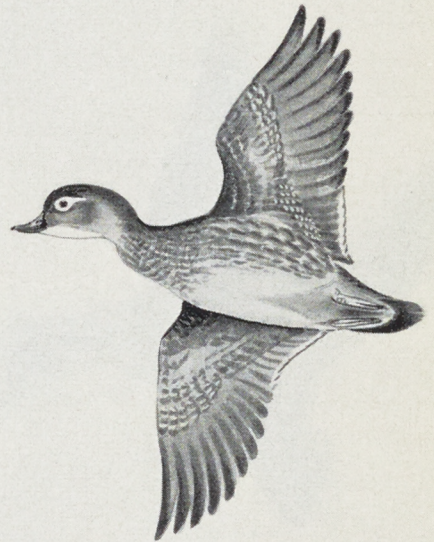
Wedge-shaped tail good field mark in flight for both sexes. Wing linings dark, mottled.



MALE



FEMALE





## BLUE-WINGED TEAL

(*Anas discors*)

Other names: Blue Wing, Teal Duck.

### FIELD MARKS

#### IN FLIGHT:

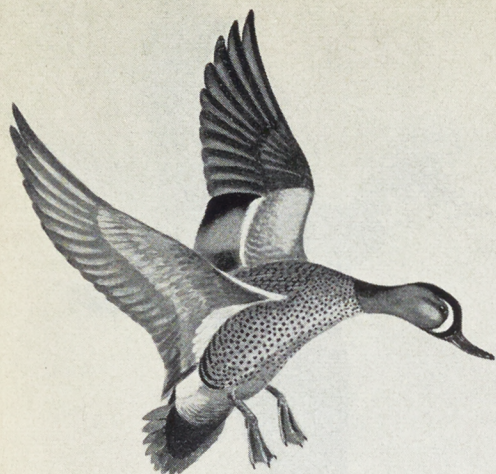
**Male and Female** — Small size. Both have large chalky blue shoulder patches and green speculum. Male has white crescent-shaped patch on side of head.

#### ON THE WATER:

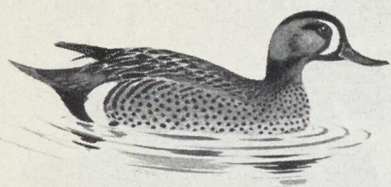
**Male**—Small size. Generally dark appearance. **White crescent on side of head.** Conspicuous white flanks.

**Female** — Small size. Greyish brown without distinctive markings.

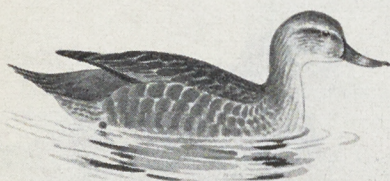
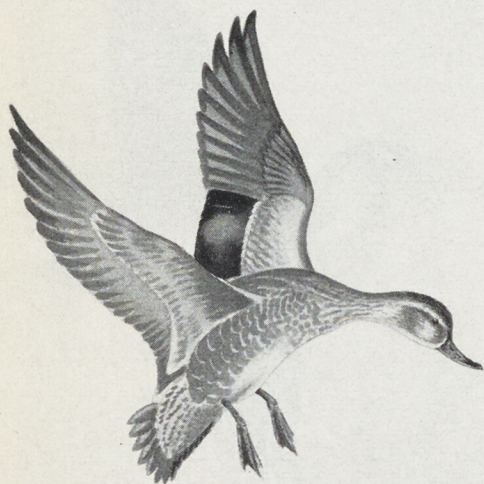
The male is distinctive and easily identified. The female in flight may be confused only with the female Cinnamon Teal, which also has the blue patch. The Blue-wing is very common. The Cinnamon is frequent only in B.C.



MALE



FEMALE





## GREEN-WINGED TEAL

(*Anas carolinensis*)

Other names: Green Wing, Common Teal.

### FIELD MARKS

#### IN FLIGHT:

**Male** — Small size, dark appearance. No contrasting markings on head or back, but flash of **metallic green on wing speculum** often seen in favorable light. The wing linings are silvery-grey.

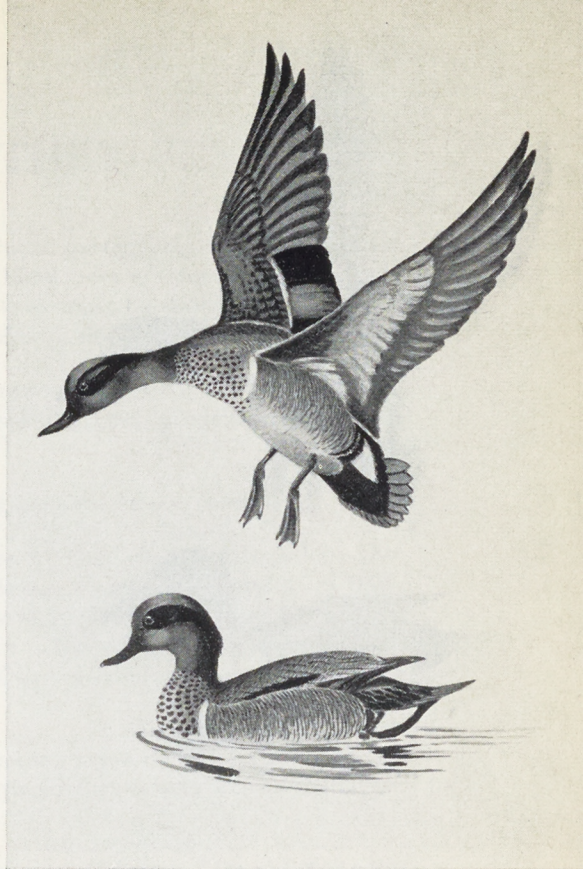
**Female** — Small size, generally brownish. **Metallic green speculum** as in male. This, plus small size, is distinctive.

#### ON THE WATER:

**Male**—**White crescent-shaped mark on body in front of wing** and **yellowish patch on under tail coverts bordered with black**, are good field marks. Small, dark head. Chestnut, green and black of head detectable only at short range.

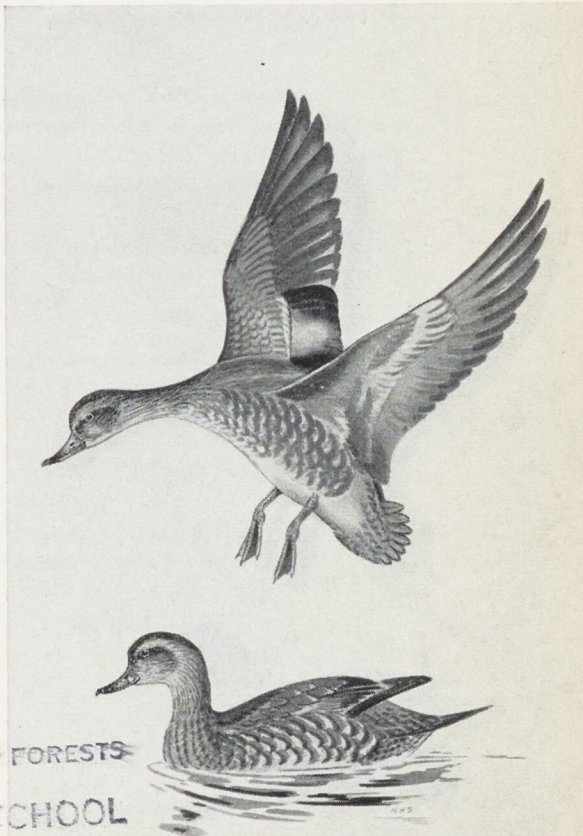
**Female**—Like Blue-wing female, except no blue shoulder patch.

**Male's front-of-wing white crescent and yellowish tail covert patch is combination possessed by no other duck.**



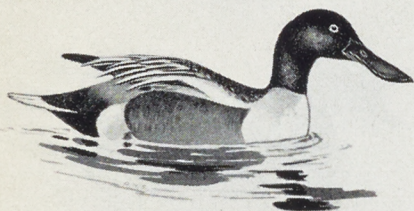
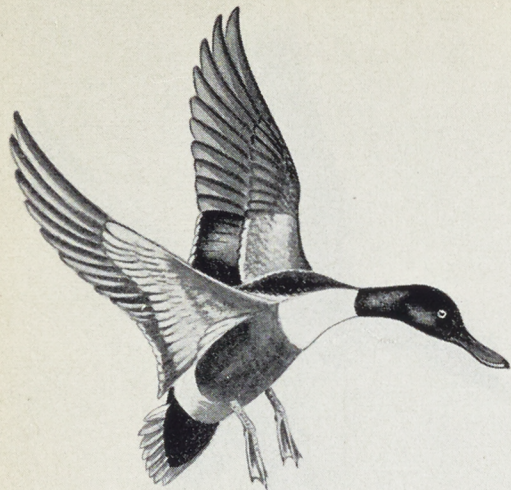
MALE

FEMALE



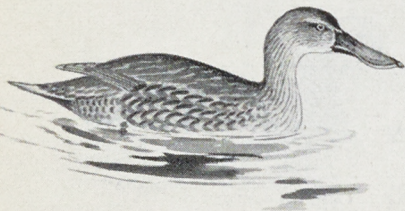
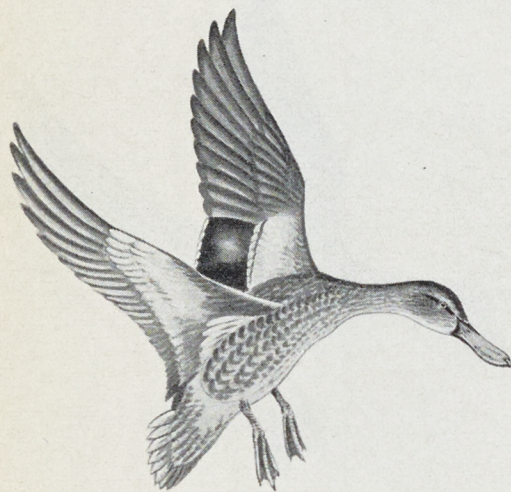
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MALE

FEMALE



## SHOVELLER (*Anas clypeata*)

Other names: Spoonbill, Spoony.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Medium size, large spoon-shaped bill. Dark head and white chest with broad chestnut band across belly. A bird of contrasting color pattern and profile which cannot be confused with any other species.

**Female**—Medium sized buffy brown duck with reduced and subdued chalky-blue shoulder patches. Spoon-shaped bill is dominant feature.

#### ON THE WATER:

**Male**—Large spoon bill, dark head with bluish-green sheen. White chest. Chestnut sides.

**Female**—Buffy brown. Large spoon bill.

The bill is absolutely distinctive in both sexes. Male shows more white than any other surface-feeding duck.



# HOW FAST DO THEY FLY?

Estimates of the flight speeds of game birds, particularly ducks, tend to be exaggerated. The hunter, crouched in the blind, sees a wedge of canvasback bearing down in driving flight. He is sure they must be travelling 150 m.p.h. After throwing two futile loads of shot, he is even more convinced.

A blue-winged teal, flipping over the reed tops, past the decoys and down the lake, gives the same impression of speed and usually elicits the remark, "How can you hit anything going that fast?"

Actually, fellow hunter, they aren't going as fast as you think.

Early literature revealed that old time hunters also were fooled by the apparent speed of ducks. Francis H. Buzzacott, a famous old hunter, in 1906 wrote "A Complete Sportsman's Guide." In it he shrewdly guessed the speeds of mallard, pintail and baldpate at 40-60 m.p.h. He was far from the truth when he credited wild geese with 80 m.p.h. and teal and canvasback with, respectively, 100 and 120 m.p.h.

Considerable work has been done in recent years on the flight speeds of ducks. Information has been gathered by timed flights over known distances and by pacing with cars or aircraft.

The speed of a duck's flight depends on two factors. Its ability to fly through the air by virtue of its own exertions, and the helping or hindering influence of the wind. The observer on the ground sees the result of these two forces, i.e., the "ground" speed. The speed at which a bird can fly by its own exertions is called "air" speed. Best measurement of this is by pacing with aircraft.

Kortright's book, "Ducks, Geese and Swans of North America," gives numerous data on the speeds reached by various species of waterfowl. These data show that geese, in ordinary flight, travel at 40-50 m.p.h. They can, when chased, crowd on an additional 10-15 m.p.h. This is also true of other waterfowl.

The canvasback is speedier and reaches 72 m.p.h. air speed when chased. Thus, a badly frightened canvasback with a 30 m.p.h. tail wind, would be capable of reaching 100 m.p.h. ground speed.

Contrary to popular belief, teal are not as fast as the larger ducks. The quick jump of a surprised teal, and its smaller size, give a false impression of speed.

Kortright quotes experiences of falconers in England, where in mixed flocks of teal and mallard, flying "all out" to escape the falcon, the first bird overtaken by the falcon is invariably a teal. Airmen report that when mixed flocks of canvasback and teal are chased, the former easily outfly the latter.

W. G. LEITCH,  
*Chief Biologist,*  
D.U. (CANADA)



## DIVING DUCKS (Tribe Aythyini)

### REDHEAD

(*Aythya americana*)

Other names: Fiddler Duck.

#### FIELD MARKS

##### IN FLIGHT:

**Male** — Dark grey duck with puffy red head, black chest and grey wing patch. Greyish white breast and belly.

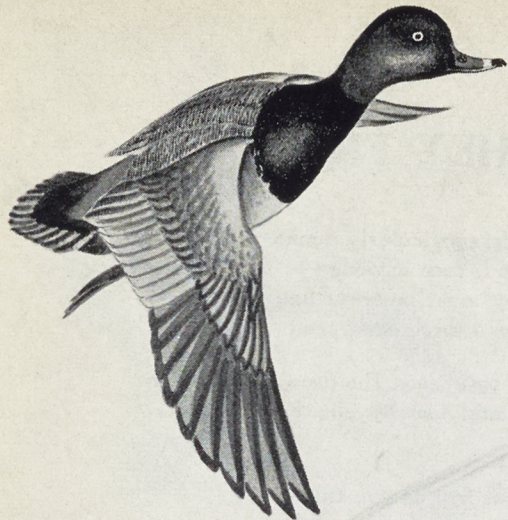
**Female** — Chunky appearance. warm brown coloring. Grey wing patch, visible only at close range.

##### ON THE WATER:

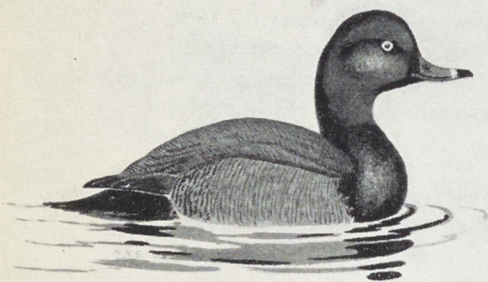
**Male** — Puffy red head, dark grey back, black chest and blue-grey bill. Tail coverts black.

**Female** — Brownish bird with grey wing patch, blue-grey bill and whitish chin.

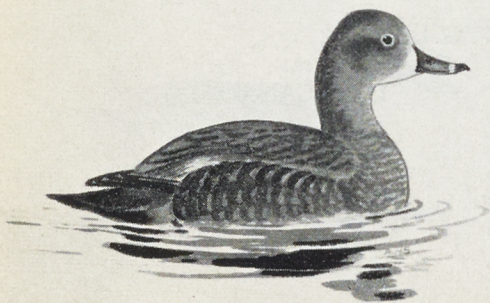
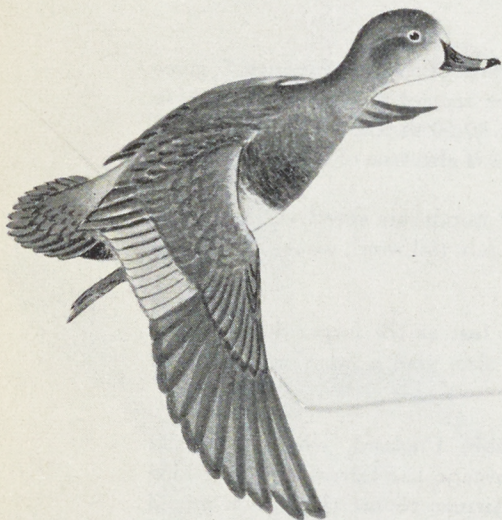
This species can be confused only with Canvasback, from which it is clearly separated by shape of head and bill. The heavy-wedge shape of the Canvasback head is absolutely distinctive.



MALE



FEMALE





## RING-NECKED DUCK

(*Aythya collaris*)

Other names: Ringbill, Blackjack,  
Raft Duck, Blackhead.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Small size. **Black head, chest and back.** Grey wing patch and **whitish underparts.**

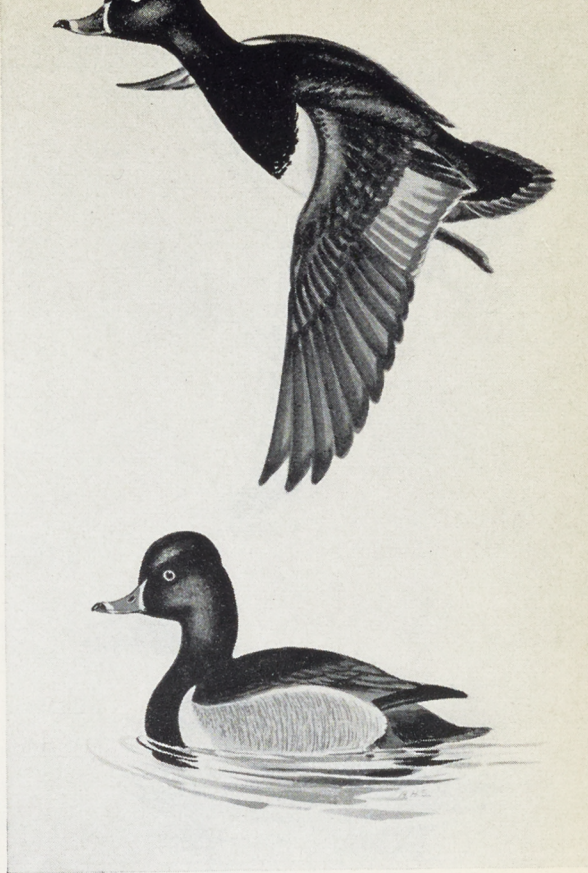
**Female**—Small dark duck with **grey wing patch** and **whitish face** at base of bill.

#### ON THE WATER:

**Male**—Small dark duck with **prominent white crescent in front of wing** between black chest and greyish sides. Pale **bluish bill** has **whitish bands at base and near tip.** Black back, greyish sides, black tail coverts.

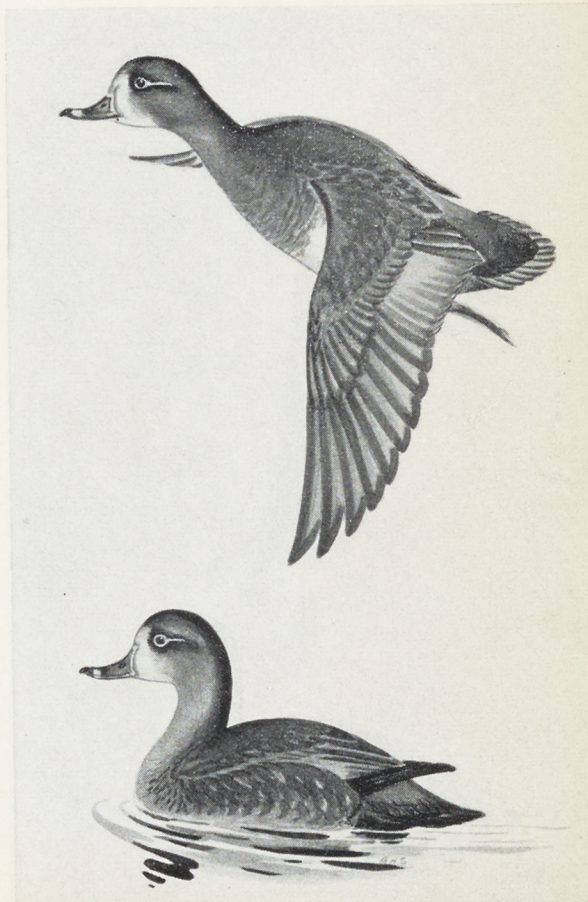
**Female**—Small, dark appearance. **Bluish bill** has **band of white near tip.**

The white crescent in front of wing is distinctive field mark for male. White band near tip of bill marks both sexes. Frequently mistaken for Lesser Scaup, the male Ring-neck shows less white on the sides and has a black back. The Scaup's back is light grey.

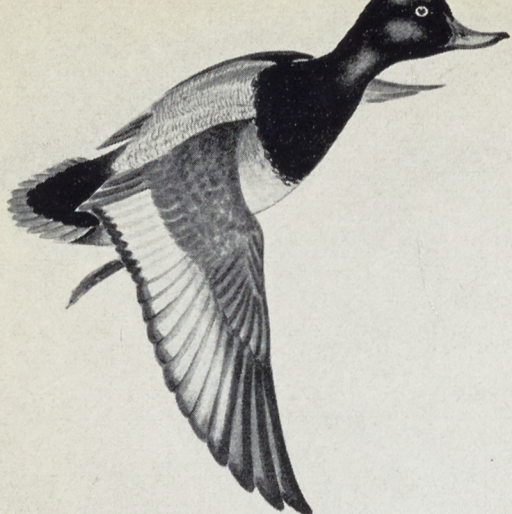


MALE

FEMALE







## GREATER SCAUP DUCK (*Aythya marila nearctica*)

Other names: Big Bluebill, Big Broadbill, Big Fall Duck.

### FIELD MARKS

#### IN FLIGHT:

**Male** — Distinguished from Lesser Scaup by more extensive white wing patch. Difference in size between these species is not appreciable. Greenish sheen on head (purplish on Lesser) is visible under favorable light conditions.

**Female** — Dark brownish duck with white underparts and white face mask at base of bill. Prominent extended white wing patch is the only reliable field mark in flight.

#### ON THE WATER:

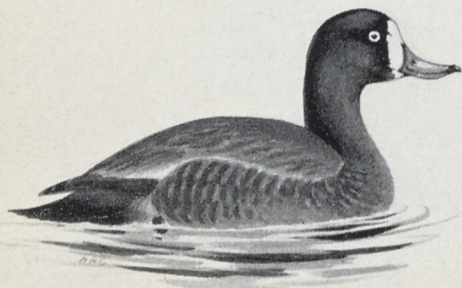
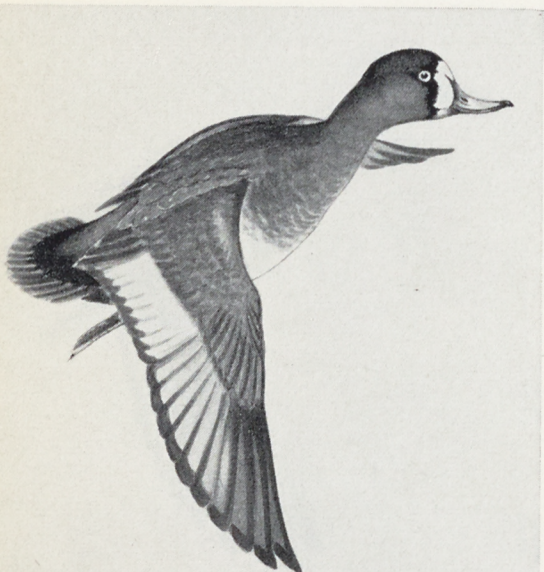
**Male** — Distinguishable from male Lesser Scaup only by greenish sheen on head.

**Female** — Distinguishable from female Lesser only in flight by extended white wing patch, which is best field mark for both sexes.

This species is rare anywhere in the prairie region.

MALE

FEMALE





## LESSER SCAUP DUCK

(*Aythya affinis*)

Other names: Bluebill, Little Bluebill, Broadbill, Fall Duck, Raft Duck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Medium size. **Light grey back, white breast and white patch on inner half of wing. Black head, neck and chest. Blue bill.**

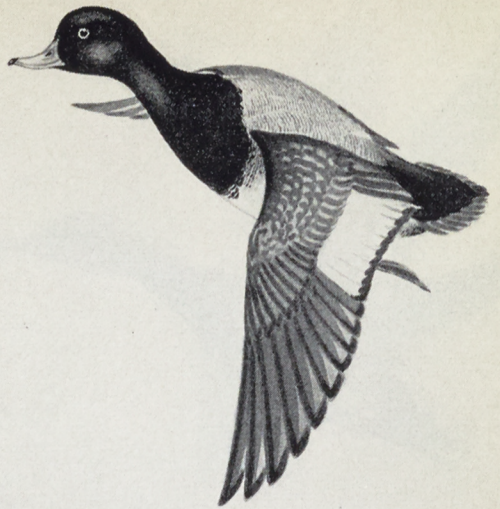
**Female**—**Dark brown duck with white wing patch and white face mask at base of blue bill.**

#### ON THE WATER:

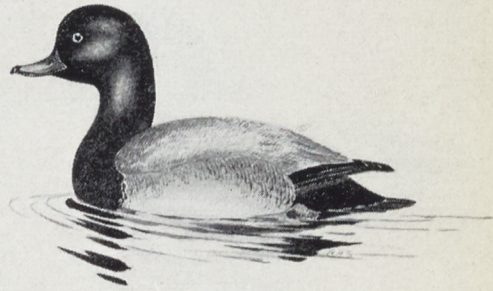
**Male**—**Black head, neck and chest. Whitish sides, light grey back. Blue bill.** Purplish sheen on head is visible only at close range.

**Female**—**Dark brownish duck with white face mask at base of blue bill. White wing patch.**  
NOTE: Immature males have white face mask in fall.

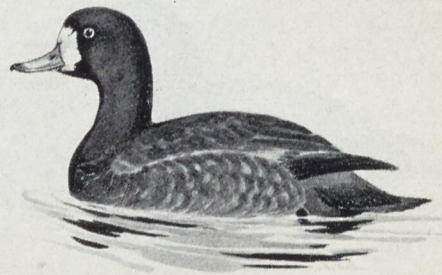
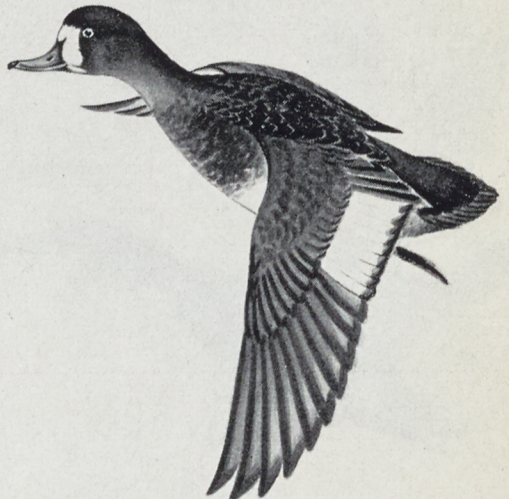
Lesser Scaup are common breeders in the Canadian prairie region. Greater Scaup breed further north and are a coastal species, except on migration when they occur inland.



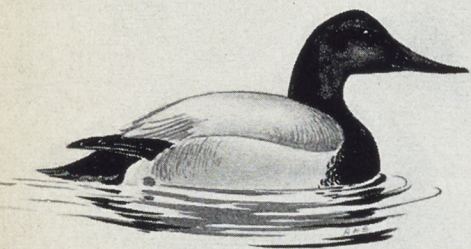
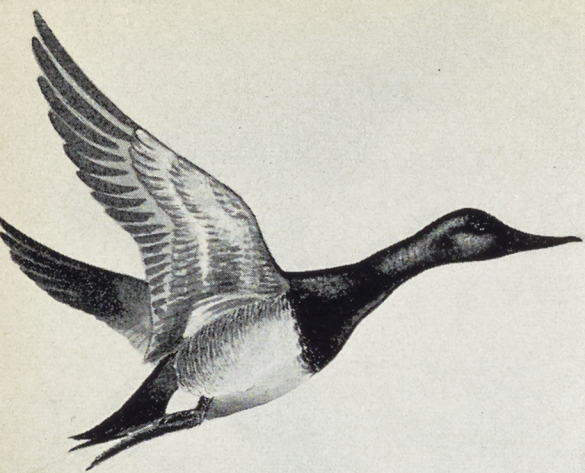
MALE



FEMALE

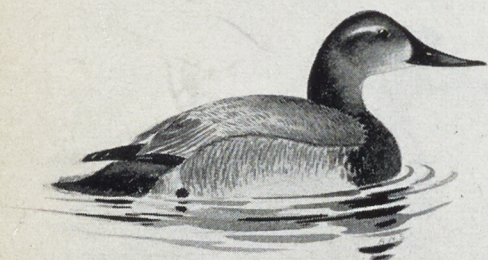
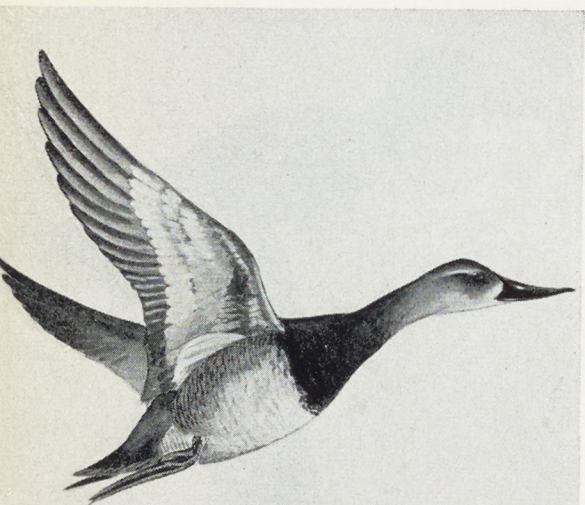






MALE

FEMALE



## CANVASBACK (*Aythya valisineria*)

Other names: Can, Bullneck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Large size. Long, wedge-shaped head. Black neck and chest, white belly. White back.

**Female** — Long, wedge-shaped head. Body coloration similar to female Redhead, but head and bill outline absolutely distinctive.

#### ON THE WATER:

**Male** — Long, reddish-brown wedge-shaped head. Black neck and chest. White back.

**Female** — Long, wedge-shaped head is best field mark.

Shape of head and bill separates Canvasback from all other species.



## BUFFLEHEAD (*Bucephala albeola*)

Other names: Butterball, Dipper Duck.

### FIELD MARKS

#### IN FLIGHT:

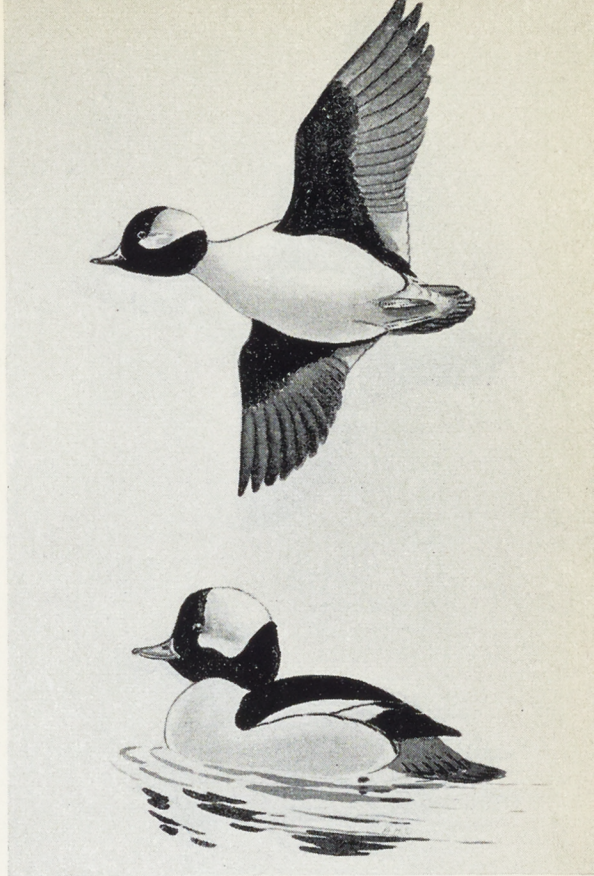
**Male**—Very small black and white duck. Large, black and white head. Black wings with small white wing patches and extensive white patches on upper sides. Shows more white than any other small duck.

**Female**—Very small size. A dark, sooty-brown duck with white spot on cheek and small, white wing patch.

#### ON THE WATER:

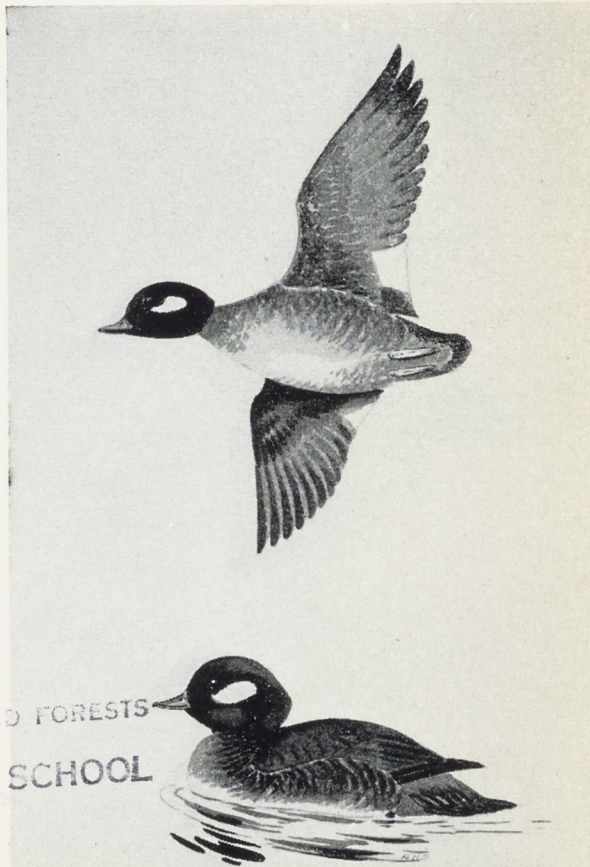
**Male**—Very small size. Prominent white patch on large, round black head. Black back. Distinguished by small size and predominance of white in plumage.

**Female**—A dark little duck with small whitish cheek patches and whitish breast.



MALE

FEMALE





## AMERICAN GOLDEN-EYE

(*Bucephala clangula*  
*americana*)

Other names: Whistler, Golden-eye, Wood Duck.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Large black head, white chest and underparts. White spot in front of eye and large white patch on inner half of wing. Wings have shrill whistle, hence name "Whistler."

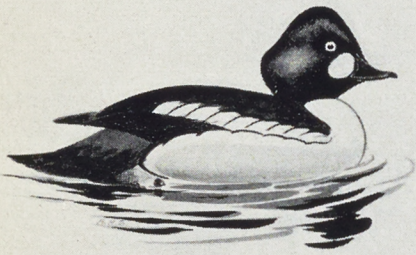
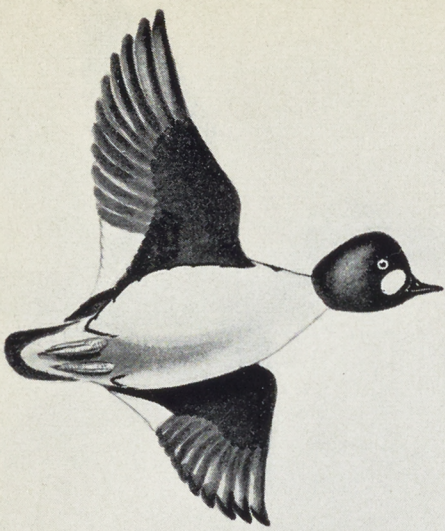
**Female**—Outline same as male. Brownish head, dark grey back. White collar, dark chest and whitish belly. White wing patches prominent, but smaller than male's.

#### ON THE WATER:

**Male**—Large tufty head with white spot in front of yellow eye. White chest, sides and underparts. More white than black in appearance. Greenish sheen on head.

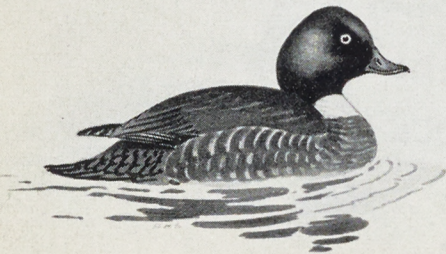
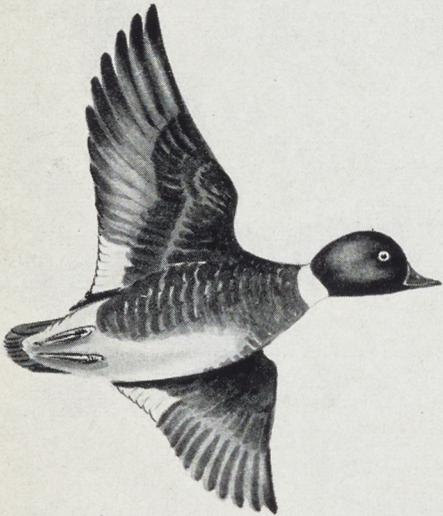
**Female**—Mostly dark grey with white collar. Dusky appearance with brownish head. Yellow eye.

This species is the common golden-eye of the interior.



MALE

FEMALE





## BARROW'S GOLDEN-EYE

(*Bucephala islandica*)

Other names: Whistler, Whistle-wing.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Outline and general appearance similar to American Golden-eye. **Large black head, white chest and underparts. Large white patch on inner half of wing.** Shows more black than the American. **Shrill whistle of wings** is heard for some distance.

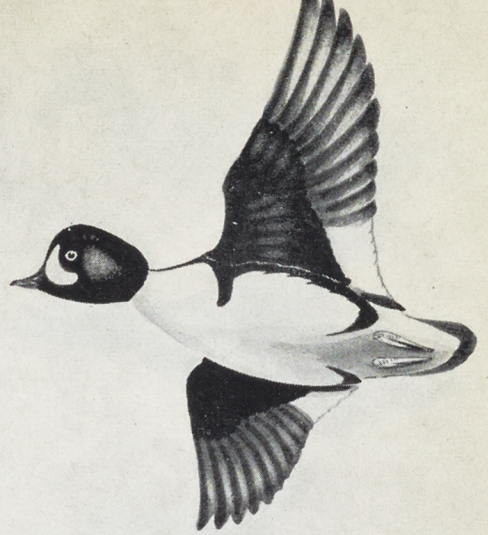
**Female**—Outline similar to male. Generally **dark grey with white collar and white underparts. White wing patch** is prominent, but smaller than male's.

#### ON THE WATER:

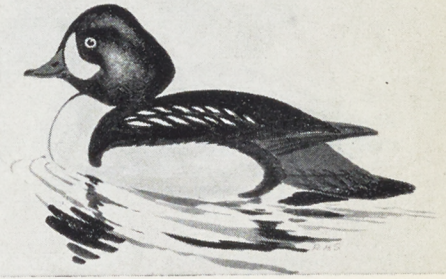
**Male**—**Crescent-shaped white spot in front of yellow eye** (American has round white spot). **Purplish sheen** on head.

**Female**—A dusky duck with **brown head, white collar and yellow eye.**

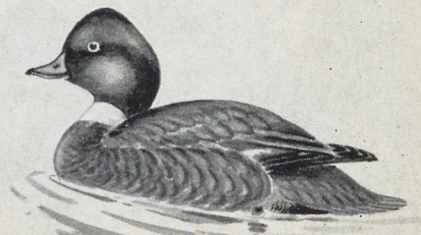
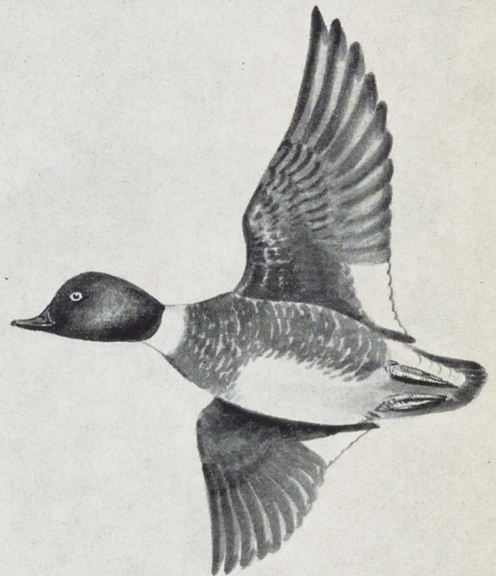
Rare in the prairie region. A western group breeds in the Rocky Mountain region of Alberta and B.C., and winters along the Pacific coast. An eastern group breeds in Labrador and winters along the Atlantic coast.



MALE



FEMALE





## WHITE-WINGED SCOTER (*Melanitta deglandi*)

Other names: Sea Coot, White-wing, Scooter.

### FIELD MARKS

#### IN FLIGHT:

**Male**—Large, heavy all-black body. Large, white patch on inner half of wing. Frequently fly close to water in single file.

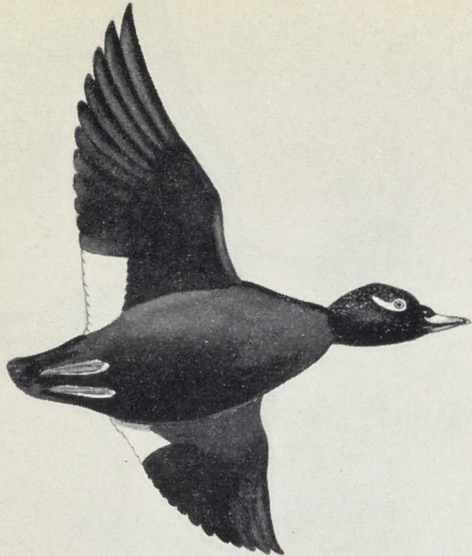
**Female**—Outline similar to male, but brownish overall. White wing patch, but less contrasting than in male.

#### ON THE WATER:

**Male**—Large, all-black duck with white spot under and back of eye. White of wing occasionally shows as rectangular patch toward rear of body.

**Female**—All dark brown with lighter areas around the eye.

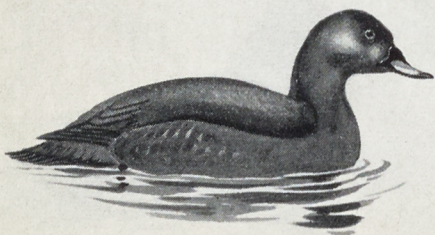
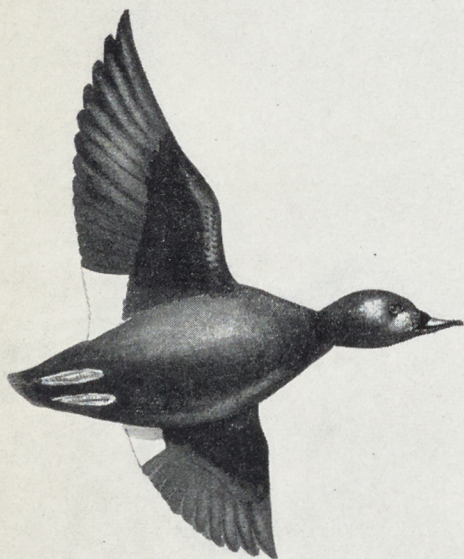
The scoters are the “big bombers” of the duck tribe. A heavy, rounded appearance in flight is characteristic.



MALE



FEMALE





**RUDDY DUCK**  
**(*Oxyura jamaicensis rubida*)**

Other names: Ruddy, Spiketail.  
Cocky Duck.

**FIELD MARKS**

**IN FLIGHT:**

**Male**—Small size. **Black head with white cheeks.** Short, thick neck, **rusty-red body, bright blue bill.**

**Female**—Outline same as male. Grey-brown, **dark head with whitish cheeks** and brownish streaked throat.

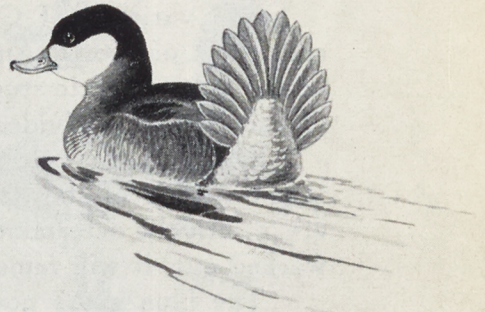
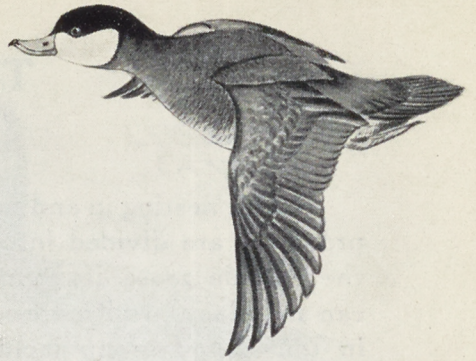
**ON THE WATER:**

**Male**—Generally **rusty-red with black cap, white cheeks,** thick neck, **bright blue bill.** Tail feathers often cocked fan-shape over back.

**Female**—Dark and chunky, greyish-brown appearance. **Dark crown and white cheeks** mottled with brown.

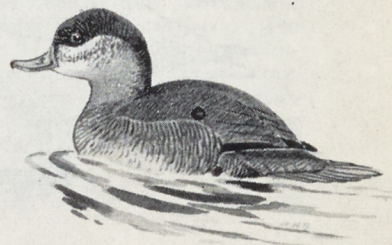
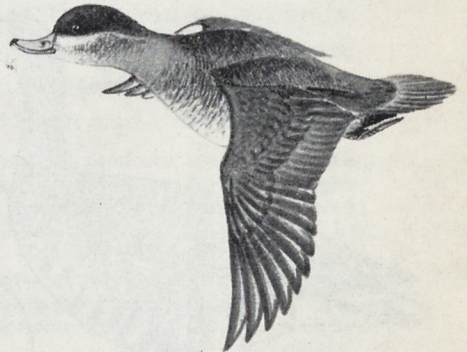
Rusty-red body (spring and summer), white cheeks and fan tail make male distinctive. Female distinguished by dark crown and whitish cheeks.

**NOTE:** Male has no mid-summer moult. Plumage changes in early fall to dark brownish hue which continues until April-May. Black crown, white cheeks do not change.



MALE

FEMALE





# THE GEESE

## (Anserinae)

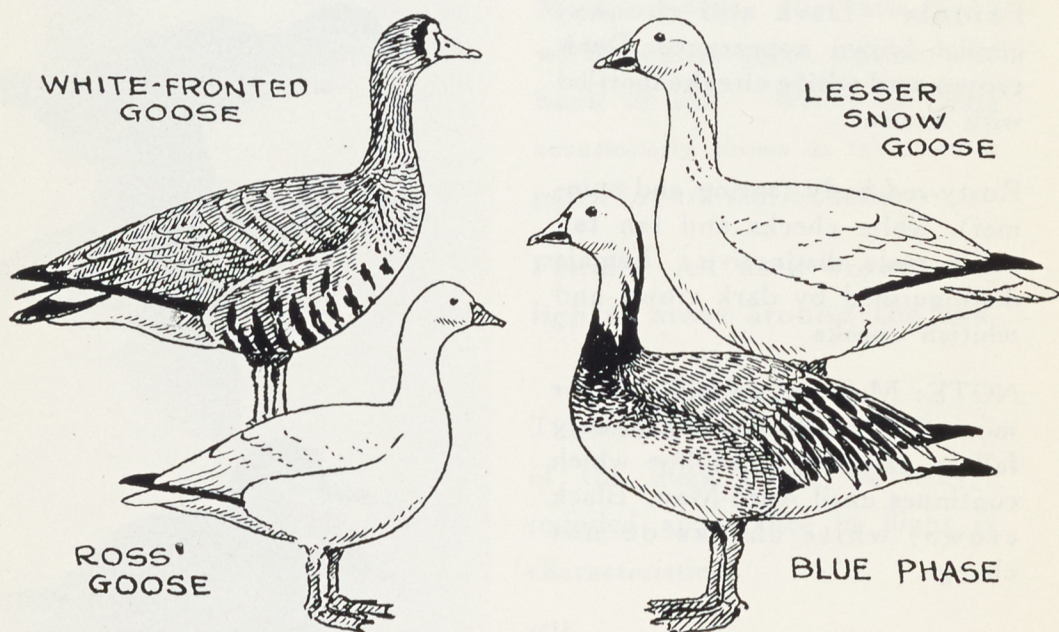
Geese nesting in and migrating through western Canada's prairie provinces are divided into three groups. The first group includes the Canada goose, its numerous sub-species and the brants (American and black), which are occasionally taken on the prairies. Species in the second group include the white-fronted (specklebelly) and the tule geese. Members of the third group are lesser snow, blue and Ross' geese.

Ten varieties of Canada geese are recognized in the A.O.U. check list of North American birds. Undoubtedly, more will be added as systematic studies proceed. For all practical purposes the Canada geese are divided into three groups, small, medium and large.

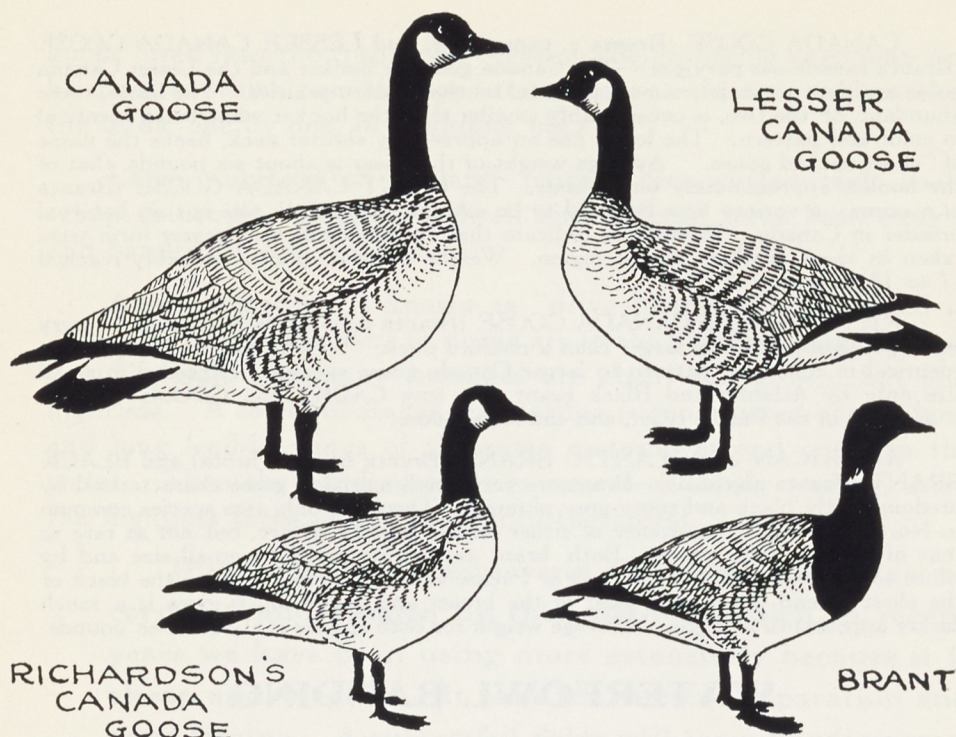
Status of the tule goose still is in doubt. It appears to be a larger edition of the white-fronted, but until its breeding grounds are positively determined and its relations with the white-fronted worked out, it will remain a question mark.

The blue goose now is regarded by many ornithologists as a color phase of the lesser snow. It migrates, winters and interbreeds with the lesser snow, but is at present confined to the eastern segment of that species' population.

Ross' goose, the diminutive member of this group, is quite rare and is protected at all times, although its resemblance to the lesser snow results in its losses to guns during migration through Alberta to California. It nests in the Perry River district of the Queen Maud Gulf in the Arctic.







Generally, the largest geese are raised on the prairie lakes and marshes and are known as the big "honkers." The intermediate birds, or Lesser Canadas, nest in the northern forests and north to the Arctic and the smaller Richardson goose (weight, four to five pounds) in the far north.

Geese nest on land or on muskrat houses, occasionally in the trees in hawks' old nests. The family migrates and winters together, disbanding only after the spring return to the breeding grounds. Geese are better walkers than either ducks or swans. They are grazing waterfowl and their diet is largely vegetable. They feed in water by tipping in shallow places like the swan and the pond duck.

LESSER SNOW GOOSE (*Chen h. hyperborea*)—A medium size goose, pure white with black wing tips, pink and black bill, pink legs and feet. Average weight is approximately five pounds. BLUE Phase (*Chen caerulescens*)—White head and neck, dark wings and body with variable amounts of white on underparts. Bluish-white wing coverts—not conspicuous in the field. Coloring of bill, feet and legs similar to snow goose. Average weight of each is approximately 5-6 pounds.

ROSS' GOOSE (*Chen rossi*)—A diminutive white goose with black wing tips, pink bill, feet and legs. Smallest of North American geese. Average weight between two and three pounds.

WHITE-FRONTED GOOSE (*Anser albifrons frontalis*) and TULE GOOSE (*Anser albifrons gambeli*)—The White-fronted is medium size, greyish-brown with orange-yellow legs and feet. White patch around face at base of bill. Breast and belly are variably splashed with black and white, forming incomplete bars. The latter feature explains the name of "specklebelly." The Tule Goose is a close relative of the White-front and is distinguished chiefly by larger size and darker coloration. Neck is longer and darker and the head is dusky brown instead of brownish-grey. Voice is coarser and more strident than that of the White-front. Average weight of White-fronted is 5-6 pounds, of Tule 6-7 pounds.



CANADA GOOSE (*Branta c. canadensis*) and LESSER CANADA GOOSE (*Branta canadensis parvipes*)—The Canada goose or honker and the Lesser Canada goose are the two varieties most plentiful on the western prairies. The lesser, more abundant of the two, is considerably smaller than the honker while being identical in color and pattern. The lesser has an appreciably shorter neck, hence the name of "short-necked goose." Average weight of the lesser is about six pounds, that of the honker approximately ten pounds. The GIANT CANADA GOOSE (*Branta c. maxima*), a variety now believed to be extinct, apparently was not an habitual breeder in Canada. Records do indicate that specimens of this largest form were taken in the Canadian prairie region. Weight of adult giants probably reached 17 to 18 pounds.

RICHARDSON'S CANADA GOOSE (*Branta canadensis hutchinsi*)—a very small goose only slightly larger than a mallard duck. Weight, four to five pounds. Identical in color and pattern to larger Canada goose species. Exceeded in small size only by Atlantic and Black brant, the tiny CACKLING GOOSE (*Branta c. minima*) of the Pacific coast, and the Ross' goose.

AMERICAN or ATLANTIC BRANT (*Branta bernicla hrota*) and BLACK BRANT (*Branta nigricans*)—Brant are very small maritime geese characterized by predominantly black and sooty-grey plumage. There are only two species common to North America. Occurrence of either on the prairies is rare, but not so rare as that of the Cackling goose. Both brant are distinguished by small size and by white collar on adults. The black or Pacific variety differs in having the black of the chest extend down over most of the breast and belly, which gives it a much darker appearance in flight. Average weight for both species is about three pounds.

## WATERFOWL BANDING

Since 1939, Ducks Unlimited has banded approximately 125,000 waterfowl (inclusive of geese) and received data on approximately 11,000 recoveries.

The primary objective of bird banding is to obtain factual information for scientific purposes. In the case of waterfowl the information is of practical value in administration of a resource which involves economic as well as recreational and aesthetic factors. Ducks Unlimited banding efforts are part of large scale waterfowl bandings being carried on by the U.S. and Canadian wildlife services, by state and provincial governments, private agencies and individuals. The cumulative results are assembled in the U.S. Bird Banding Division offices at Patuxent Refuge, Laurel, Maryland. The Canadian banding records are also kept at Ottawa by the bird banding division of the Canadian Wildlife Service. While a great many birds other than waterfowl are banded, chiefly by amateur ornithologists, all records are accumulated in the U.S. Bird Banding Division. That body notifies banders of recoveries made.

## BANDING METHODS

Several methods are used to capture live ducks for banding and release. One method, used extensively by us in the past, is a simple chicken wire cage with a funnel entrance, baited with a mixture of barley and durum wheat. A smaller gathering cage, often used in conjunction with the larger, facilitates capture and handling of



ducks lured into the trap. On occasion the gathering cage may not be used, in which case the operator steps into the trap and catches the birds, one by one, in a landing net.

Large numbers of mallard, pintail, blue-winged teal, lesser scaup (bluebill) baldpate, gadwall and redhead have been caught and banded by this method.

Another method is known as "drive banding" and is used in July when larger numbers of ducks are in the flightless stage of their annual moult and many juveniles are about full grown, but still flightless. A corral of stakes and netting is constructed on dry land and long lead-in wings of the same material extend out into the water. Then the banding crew, in canoes or slowly wading, drive the flightless birds before them into the corral.

Hundreds, at times several thousand ducks can be corralled and banded by this method, which in recent years we have been using more extensively because it is cheap and effective. It calls for careful preparation and good timing. A successful drive will tax a banding crew and their volunteer helpers to the limit. Handling and recording the species, age and sex of two or three thousand birds, all of which are milling about and trying to escape, and which have to be handled rapidly so they can resume their normal lives as quickly as possible, demands concentrated speed and effort. The crews work long hours without pause or rest, which means crew members are exhausted when the last bird is tagged and released.

To simplify procedure, the net men select the males of one species and pass them to the banders who, using a string of consecutively numbered bands, can record dozens or hundreds with one entry. The same thing is done with females and juveniles. This method works well with surface-feeding ducks like mallard, pintail blue-winged teal and other species commonly found in shallow prairie sloughs, but is not so good for diving ducks, which dive and bypass the canoes or men.

## RECORDING METHOD

In the office, the banding details are transferred to punched cards when recovery data are received from the U.S. Fish and Wildlife Service. Using a needle through the holes on the card (slotted according to a code), any required information can be obtained in a



minute or two. The aluminum bands supplied by the U.S. Fish and Wildlife Service bear the following inscription:

**Advise Fish & Wildlife Service  
Write Washington D.C. U.S.A.  
(Serial number here)**

A person shooting or otherwise acquiring a banded duck or goose should send the band and details of when and where shot, by whom and your name and address to the Fish and Wildlife Service, Washington, D.C., U.S.A. In due course, they will advise you where, when and by whom the bird was banded.

Ducks Unlimited has published two progress reports on its own banding. "Waterfowl Banding 1939-50" in October, 1952 (out of print) and "Waterfowl Banding 1939-54" in December, 1956.

## **NORTH AMERICAN WATERFOWL FLYWAYS WITH TRIBUTARY MIGRATION ROUTES**

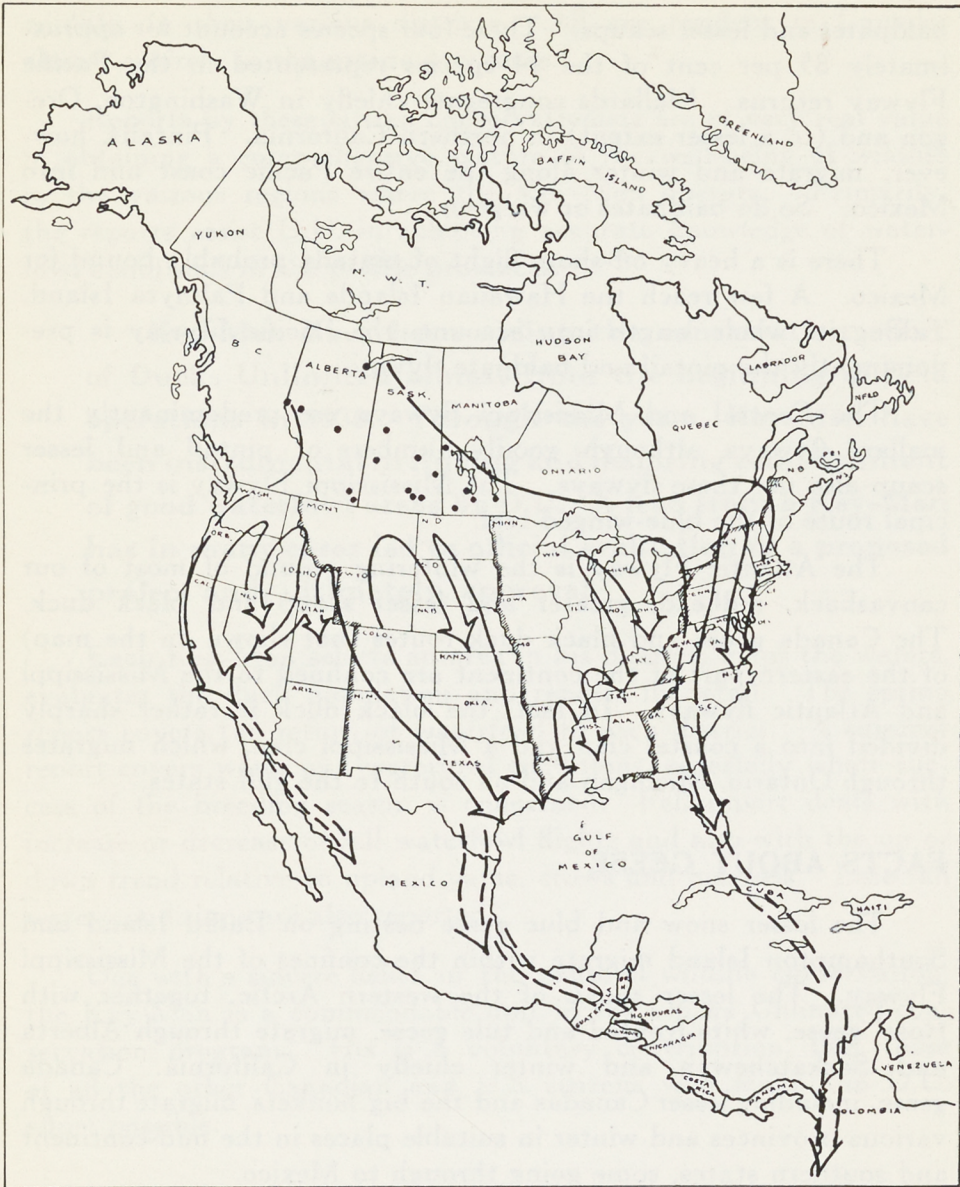
There are four main waterfowl flyways, namely; Pacific, Central, Mississippi and Atlantic. This flyway concept was first brought to the attention of ornithologists by Frederick C. Lincoln of the U.S. Fish and Wildlife Service after a study, many years ago, of banding recovery data. It has proved to be a useful concept, particularly in the administration of our waterfowl resources. Hunting seasons, bag limits, etc., are based on the flyway concept.

All migratory birds roughly follow these flyways, although the migration routes of individual species may be more restricted (in some cases) or so widespread as to cut across several flyways. Waterfowl are fairly clean cut in allegiance to their respective flyways, i.e., mallards that migrate from Alberta to the Pacific coast states, do so habitually. So do the mallards that winter in the Central or Mississippi flyways, no matter whether they come from Alberta, Saskatchewan or Manitoba.

### **KEY TO MAP**

The map (facing this page) has been prepared from banding data of Ducks Unlimited. It is based on approximately 11,000 recoveries received up to December 31, 1960, from ducks banded in western Canada. The black dots in the prairie provinces are the D.U. banding stations. The solid black arrows indicate the migration routes to chief wintering grounds. The broken black arrows





Waterfowl flyway map, based on band returns by Ducks Unlimited, 1939-60.

indicate the continuation of the migration routes into Mexico, Central America and through the West Indies to South America. The shaded dividing lines indicate the flyway zones as laid down by the U.S. Fish and Wildlife Service for management purposes and represent, left to right, the Pacific, Central, Mississippi and Atlantic flyways. Only one species carries on into South America, west of the Andes, and that is the blue-winged teal.

The Pacific Flyway is used principally by mallards, pintails,



baldpates and lesser scaups. These four species account for approximately 85 per cent of the 14 species represented in the Pacific Flyway returns. Mallards congregate chiefly in Washington, Oregon and (to a lesser extent) in northern California. Pintails, however, migrate and winter along the entire Pacific coast and into Mexico. So do baldpates or widgeon.

There is a heavy off-shore flight of pintails probably bound for Mexico. A few reach the Hawaiian Islands and Palmyra Island. Taking its whole length into account, the Pacific Flyway is predominantly the pintail and baldpate flyway.

The Central and Mississippi flyways are predominantly the mallard flyways, although goodly numbers of pintail and lesser scaup also use these flyways. The Mississippi Flyway is the principal route of the blue-winged teal.

The Atlantic Flyway is the wintering ground of most of our canvasback, redhead, greater and lesser scaup and black duck. The Canada goose and black duck routes (not shown on the map) of the eastern part of the continent are confined to the Mississippi and Atlantic flyways. In fact, the black duck is rather sharply divided into a coastal clan and a Mississippi clan, which migrates through Ontario, Michigan and on south to the gulf states.

## FACTS ABOUT GEESE

The lesser snow and blue geese nesting on Baffin Island and Southampton Island migrate within the confines of the Mississippi Flyway. The lesser snows of the western Arctic, together with Ross' geese, white-fronted and tule geese, migrate through Alberta and Saskatchewan and winter chiefly in California. Canada geese, including lesser Canadas and the big honkers, migrate through various provinces and winter in suitable places in the mid-continent and southern states, some going through to Mexico.

Each flyway has some segments of each species which migrate and winter within its boundaries and they faithfully adhere to these traditional routes. Other species cut across several flyways in their journeys to and from the nesting grounds. These, too, are traditional routes which they follow faithfully, year after year.

## D.U. KEY-MEN

A notable group in the realm of wildlife conservation is that of the Ducks Unlimited Key-Men, a purely voluntary body of private citizens. They contribute regular reports on waterfowl and other



wildlife, in their various districts. All are resident in Canada, almost entirely in the prairie provinces.

Reports by these citizen conservationists are of very real value in obtaining a comprehensive picture of the well-being of wildlife in the various regions where the Key-Men operate. Primarily, the reports assist D.U. in achieving accurate knowledge of waterfowl conditions in the prairie provinces.

**Key-Men have been aiding the conservation effort of Ducks Unlimited almost from the beginning of field operations in 1938. Through the years, Key-Men have been instrumental in finding and inspiring establishment of good waterfowl areas by D.U. A lead from a Key-Man has in many cases led to official evaluation of a proposed project and, ultimately, approval.**

Each Key-Man selects an area in his district, maps the waters, evaluates the duck population and reports in detail. The spring report covers the return of waterfowl to each district. A summer report covers water and waterfowl conditions, especially where success of the breeding season is concerned. Fall report deals with increase or decrease of fall waterfowl flights and also with the up or down trend relative to upland game, crows and magpies. Late fall water conditions are also reported.

One with a sincere belief in the cause of wildlife conservation, the Key-Man is a commendable unit in the Ducks Unlimited conservation program. His is a voluntary contribution, like those of all the other Canadian and U.S. citizens who make the D.U. effort possible.

## **FILM LIBRARY**

Modern medium of education and information, the 16 millimetre movie film is utilized by Ducks Unlimited to provide the general public in both Canada and the United States with visual evidence of conservation at work. The Ducks Unlimited film library is maintained as a service to schools, sportsmen's groups, governments, telecasters and all others sincerely interested in conservation of wildlife.



The production of movies to tell the story of D.U., waterfowl and conservation was begun in the very early years of field work in the Canadian prairie region. The making of these conservation films was not abandoned in the war-torn early forties. It was felt that war did not lessen the real need for conservation, but rather made it more imperative if returning servicemen were to enjoy a well-earned relaxation in the hunting field. Many of the veterans have become the staunchest of D.U. supporters.

Since a film library of productions dealing with one specific field is necessarily limited in size, the D.U. library is hard-pressed to keep pace with public demand. Each request is serviced whenever possible, at no cost to the borrower except that connected with shipment of the film. Films are sent express collect and should be returned express prepaid. When requesting a film, it is always advisable to indicate an alternate choice, first choice frequently being unavailable because of previous booking.

Requests for films may be directed to Ducks Unlimited offices at:

<b>Winnipeg</b> .....	<b>389 Main Street</b>
<b>Regina</b> .....	<b>1651—11th Avenue</b>
<b>Edmonton</b> .....	<b>10740 Jasper Ave.</b>

NOTE—Current list of available D.U. films may be obtained by applying to any of the above offices. If a written request, be sure to give exact return address.

DEPARTMENT OF LANDS AND FORESTS  
FORESTRY TRAINING SCHOOL  
ALBERTA







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